

WHAT IS CLAIMED IS:

1. A hand held spray apparatus for removing insects from and cleaning plant leaves, the apparatus comprising:

a substantially rigid tubular handle portion adapted to be connected to a source of pressurized water and having a substantially straight proximal section, a substantially straight distal section, and a bend point between the proximal and distal sections;

a nozzle portion at a generally distal end of the handle portion, the nozzle portion adapted to direct a flow of the pressurized water to create a substantially planar wall of water directed outwardly about the circumference of the nozzle, the wall of water being substantially perpendicular to a longitudinal axis of the nozzle portion; and

a rotation axis defined parallel to the handle distal section and through a point adjacent a proximal end of the handle portion;

wherein rotating the apparatus about the rotation axis when the handle distal section is in a generally horizontal attitude changes the elevation of the distal section without changing its attitude.

2. The apparatus of Claim 1, wherein the nozzle portion is adapted to create a second substantially planar wall of water, the second wall of water being spaced apart from and substantially parallel to the first wall of water.

3. The apparatus of Claim 2, wherein the nozzle portion has a cross sectional profile not substantially larger than a profile of the handle.

4. A hand held spray apparatus for removing insects from and cleaning plant leaves, the apparatus comprising:

a substantially rigid handle portion;

an elongate, substantially rigid body portion communicating with the handle portion; and

a nozzle portion at a generally distal end of the body portion, the nozzle portion adapted to be connected to a source of pressurized water and to direct the pressurized water in a flow directed substantially outwardly from the nozzle portion and around at least half of the circumference of the nozzle portion

5. The apparatus of Claim 4, wherein the nozzle portion is adapted to create a substantially uniform wall of pressurized water, the water wall lying in a plane substantially perpendicular to a longitudinal axis of the body portion and completely encircling the body portion.

6. The apparatus of Claim 5, wherein the water wall is substantially contiguous about the nozzle portion.

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~~AD~~ 7. The apparatus of Claim 5, wherein the nozzle portion is adapted to create a second wall of pressurized water, the second wall being spaced from and substantially parallel to the first wall.

8. The apparatus of Claim 7, wherein the walls of water are spaced between about 1" to 6" apart.

9. The apparatus of Claim 4, wherein at least part of the pressurized water flow is directed outwardly from the nozzle at an acute angle relative to a longitudinal axis of the nozzle.

10. The apparatus of Claim 4, wherein the nozzle portion comprises means for creating a substantially uniform wall of pressurized water, the water wall lying in a plane substantially perpendicular to a longitudinal axis of the body portion and completely encircling the body portion.

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~~A3~~ 11. The apparatus of Claim 4, wherein the nozzle portion is adapted to create a series of fan sprays of pressurized water directed in a plurality of substantially parallel, substantially vertical planes when the longitudinal axis of the body portion is substantially horizontal, the series of fans of water collectively spraying water outwardly around the circumference of the nozzle portion.

12. The apparatus of Claim 4, wherein the nozzle portion comprises a tube and an end plug, the end plug having a plug body and a dispersing plate, at least a portion of the plug body lying within the tube, and a space defined between the dispersing plate and a distal end of the tube so that water flowing through the nozzle portion flows between the tube and the plug body and through the space.

13. The apparatus of Claim 12, wherein the nozzle portion additionally comprises a second tube and an intermediate plug attached to a proximal end of the first tube, the intermediate plug having a substantially hollow plug body and a dispersing

plate, at least a portion of the plug body lying within the second tube, and a space is defined between the dispersing plate and a distal end of the second tube so that a portion of water flowing through the nozzle portion flows between the second tube and the plug body and through the space, and a portion of water flowing through the nozzle portion flows through the hollow plug body and into the first tube.

14. The apparatus of Claim 12, wherein the plug body includes ribs extending therefrom, and the plug body is attached to the tube by the ribs.

15. The apparatus of Claim 12, wherein the dispersing plate comprises spacers extending therefrom, and the spacers are adapted to contact the end of the tube so that the dispersing plate is spaced a fixed distance from the end of the tube.

16. The apparatus of Claim 4, wherein the body portion is substantially straight and the handle portion comprises a bend point.

17. The apparatus of Claim 16, wherein the handle portion and body portion are integrally formed.

18. The apparatus of Claim 16, wherein the handle portion and body portion comprise a plurality of modules.

19. A method for removing insects from and cleaning a plant having leaves, the method comprising:

providing a hand held spraying apparatus having a handle, an elongate body portion, and a nozzle portion at a distal end of the body portion, the nozzle portion adapted to direct water flow outwardly therefrom around the circumference of the nozzle portion;

providing a source of water under pressure;

placing the spraying apparatus into communication with the source of water under pressure;

positioning the nozzle adjacent an underside of a plant leaf so that a portion of the water directed by the nozzle impacts the leaf underside; and

advancing and retracting the apparatus so that a flow of water impacts the leaf underside along its length.

20. The method of Claim 19, wherein the elongate body portion is substantially straight.

21. The method of Claim 20, wherein the nozzle is adapted to direct a flow of water in a substantially vertical plane.

22. The method of Claim 20, wherein at least one of the substantially vertical planes is substantially perpendicular to the nozzle portion and comprising the step of holding the elongate body in a substantially horizontal attitude.

23. The method of Claim 22, wherein the handle includes a bend point and comprising step of adjusting the elevation of the body portion by rotating the handle about a proximal end of the handle.

24. The method of Claim 19, additionally comprising advancing and retracting the apparatus into and out of the plant at a plurality of locations so that water directed by the nozzle simultaneously impacts the top side of a first plant leaf along at least a portion of its length and the underside of a second plant leaf along at least a portion of its length.

25. The method of Claim 19, wherein the nozzle is adapted to create a substantially planar and contiguous wall of water around the circumference of the nozzle.

26. The method of Claim 25, wherein the nozzle is adapted to create two or more substantially planar and contiguous walls of water around the circumference of the nozzle, the walls of water being spaced apart from each other.

27. The method of Claim 25, additionally comprising advancing and retracting the nozzle between leaves of the plant so that the portions of the wall of water simultaneously impact undersides of leaves generally above the nozzle, top sides of leaves generally below the nozzle, and any matter that may be between the leaves of the plant.

28. The method of Claim 27, additionally comprising advancing and retracting the nozzle between leaves of the plant at a plurality of locations.

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